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PREVENTIVE DETENTION AND THE JUDICIAL PREDICTION OF DANGEROUSNESS FOR JUVENILES: A NATURAL EXPERIMENT*

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I. INTRODUCTION

Since 1970, legislatures have increasingly relied on preventive detention—detention before trial ordered solely to prevent an accused from committing crime during the pretrial period—as an instrument of social control.¹ Prior to this period, detention before trial was usually ordered only to assure an accused's presence at trial or to ensure the integrity of the trial process by preventing an accused from tampering with witnesses. Today, the majority of states and the federal system have changed their laws to allow judges to detain arrestees who pose a risk to society if released during the pretrial period.² Half of these laws were passed in the 1980's.³

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¹ See, e.g., *Hearings Before the Subcomm. on Constitutional Rights of the Comm. on the Judiciary*, 91st Cong., 2d Sess. (1970); D.C. CODE ANN. §§ 23-1321 to 1332 (1981 & Supp. 1995).

² Mary Toborg & John Bellasai, *Attempts to Predict Violence: Research Findings and Legislative Responses*, in THE PREDICTION OF CRIMINAL VIOLENCE 101, 107 (Fernard N. Dutille & Cleon H. Foust eds., 1987); John Goldkamp, *Danger and Detention: A Second Generation of Bail Reform*, 76 J. CRIM. L. & CRIMINOLOGY 1 (1985).

³ Toborg & Bellasai, *supra* note 2, at 108 (adding together the 15 states mentioned

The significant increase in the use of detention before trial to prevent crime has not occurred without debate and legal challenge. Two U.S. Supreme Court decisions in the 1980s ensured that preventive detention would continue to be part of legal proceedings in criminal courts throughout the country. *Schall v. Martin*⁴ upheld a New York statute authorizing the preventive detention of juvenile delinquents, and *United States v. Salerno*⁵ upheld the federal Bail Reform Act of 1984⁶ which authorized the use of preventive detention in federal criminal prosecutions. Although the Supreme Court in both cases rejected the use of detention before trial for *punitive* purposes,⁷ it approved its use as a non-punitive *regulatory* governmental power to prevent future crimes and thereby advance state objectives to protect community safety.

Thus, the degree to which preventive detention furthers its community safety purpose depends entirely upon the *capacity* to predict who will commit a crime over a specified period of time. These short-term predictions of dangerousness are made for defendants awaiting further court appearances. Both *Schall* and *Salerno* challenged the use of preventive detention on the ground that the prediction capacity is too poor to justify its use, but these challenges were squarely rejected. In both cases, the Court concluded that predictions of dangerousness were not so unreliable as to pose due process or equal protection concerns.⁸ In *Schall*, the Court emphasized that "there is nothing inherently unattainable about prediction of future criminal conduct";⁹ it also acknowledged that the prediction of future criminal conduct is "an experienced prediction based on a host of variables which cannot be readily codified."¹⁰ However, the validity of judicial predictions of dangerousness is unknown, and the consequences of false predictions of future crimes remain the hidden cost of preventive detention. The predictive validity of judicial determinations of dangerousness inherent in preventive detention is the focus of this research.

and the Bail Reform Act of 1984).

⁴ 467 U.S. 253 (1984).

⁵ 481 U.S. 739 (1987).

⁶ 18 U.S.C. §§ 3141-56 (1988 & Supp. 1993).

⁷ See *Bell v. Wolfish*, 441 U.S. 520, 535-38 (1979); *United States v. Edwards*, 430 A.2d 1321 (D.C. Cir. 1981). However, the decision in *Schall* also noted that the terms and conditions under which preventive detention is imposed must satisfy due process protections, which may include rights to counsel, rebuttal, and confrontation of witnesses. *Schall*, 467 U.S. at 274.

⁸ *Schall*, 467 U.S. at 278-81; *Salerno*, 481 U.S. at 751.

⁹ *Schall*, 467 U.S. at 278.

¹⁰ *Id.*

A. BAIL REFORM AND THE EVOLUTION OF PREVENTIVE DETENTION

Preventive detention was part of the second generation of "bail reform" in the 1970s and beyond.¹¹ Historically, bail statutes were designed to assure the defendant's appearance at court proceedings. This second bail reform effort followed very closely upon the first and differed sharply from it. The first reforms, in the 1960s, were aimed principally at eliminating the unregulated use of pretrial detention, primarily among poor defendants in urban jails. Reformers were critical of the conditions of confinement in American jails, the discriminatory setting of unaffordable bail for the urban poor, and the indirect use of punitive detention.¹²

Judges were empowered to set bail indiscriminately. Through this power, judges set unaffordable bail amounts to detain many defendants who they regarded as public safety threats. This unofficial use of detention was unacknowledged by courts, in part because there was reason to believe at the time that the Supreme Court would declare the formal use of preventive detention for presumptively innocent defendants unconstitutional.¹³

In 1970, Congress held hearings to consider legislation that would officially embrace the use of preventive detention to protect the public from dangerous defendants during the period from arraignment through trial.¹⁴ By 1980, preventive detention was codified in several states, including Florida, California, and the District of Columbia.¹⁵ For example, the Florida law said, "it is the intent of the legislature that the primary consideration [for pretrial detention] be the protection of society from risk of physical harm to persons."¹⁶ The Federal Bail Reform Act of 1984 further moved the emphasis in bail decisions toward the use of denial of bail for the purpose of community protection.¹⁷ Ironically, preventive detention was becoming a prominent feature of pretrial decision-making just as pretrial release and innovations such as Release on Recognizance (ROR) and condi-

¹¹ Goldkamp, *supra* note 2, at 6.

¹² See Goldkamp, *supra* note 2, at 3-5; DANIEL J. FREED & PATRICIA M. WALD, *BAIL IN THE UNITED STATES: 1964* (1964); WAYNE H. THOMAS, *BAIL REFORM IN AMERICA* (1976); MALCOLM M. FEELEY, *THE PROCESS IS THE PUNISHMENT* (1979).

¹³ See, e.g., *Stack v. Boyle*, 342 U.S. 1, 4-5 (1951) (stating that the purpose of bail is to assure a defendant's appearance at trial). See also *Carlson v. Landon*, 342 U.S. 524 (1952).

¹⁴ Arthur Angel et al., *Preventive Detention: An Empirical Analysis*, 6 HARV. C.R.-C.L. L. REV. 300 (1971); John Mitchell, *Bail Reform and the Constitutionality of Pretrial Detention*, 55 VA. L. REV. 1223 (1969); Lawrence Tribe, *An Ounce of Detention: Preventive Justice in the World of John Mitchell*, 56 VA. L. REV. 371 (1970).

¹⁵ See, e.g., FLA. STAT. ANN. § 907.041(1) (West 1985); CAL. CONST. ART. 1 § 12 (1982); D.C. CODE ANN. §§ 23-1321-32 (1981 & Supp. 1985).

¹⁶ Goldkamp *supra* note 2, at 21; FLA. STAT. ANN. § 907.041(1) (West 1985).

¹⁷ Bail Reform Act of 1984, 18 U.S.C. §§ 3141-56 (1988 & Supp. 1993).

tional release had nearly replaced the traditional cash bail system.¹⁸ The *Schall* and *Salerno* decisions completed the transformation of the purpose of bail from its traditional emphasis on ensuring court appearance to the protection of the public from dangerous persons.

These developments raise two concerns. First, preventive detention statutes reintroduce relatively standardless bases for detention decisions. The bail reforms of the 1960s attempted to eliminate arbitrariness by providing meaningful criteria for judicial consideration in setting bail.¹⁹ Critics of the old cash bail system correctly complained that the absence of such criteria were invitations to disparity and capriciousness.²⁰

Unfortunately, the new preventive detention statutes commonly fail to be precise in defining eligibility for detention. Even when statutes are explicit in permitting detention on grounds of "dangerousness," they frequently fail to provide specific standards for determining dangerousness.²¹ Terms such as "threat," "danger," and "public safety" are operationally defined in fewer than half the statutes with such references. Rarely are distinctions made between threats to the "community" and threats to potential "victims." Many states include threats to property in their definitions, leading to obvious problems in interpretation, uniformity, and validation of statutes. Most important, the standardless bases for making detention decisions risk false prediction by their broad application to pretrial defendants who may not be reasonably considered "dangerous."²²

The second concern—and the one which this Article addresses—is the inability to validate the efficacy of judicial predictions of dangerousness made under these statutes. Because defendants are detained prior to committing an act, it has not been possible to validate the prediction of their future wrongdoing. Once a person is detained as dangerous, it is impossible to demonstrate that the detention was unnecessary or wrongful. According to Goldkamp, the degree to which judges wrongfully detain defendants is unknowable because their decisions "are unfalsifiable."²³

¹⁸ Marc Miller & Martin Guggenheim, *Pretrial Detention and Punishment*, 75 MINN. L. REV. 335 (1990).

¹⁹ See John S. Goldkamp, *TWO CLASSES OF THE ACCUSED* (1979); Goldkamp, *supra* note 2, at 2-3.

²⁰ JEFFREY A. ROTH & PAUL B. WICE, *PRETRIAL RELEASE AND MISCONDUCT IN THE DISTRICT OF COLUMBIA* (1978); JOHN S. GOLDKAMP & MICHAEL R. GOTTFREDSON, *POLICY GUIDELINES FOR BAIL: AN EXPERIMENT IN COURT REFORM* (1985).

²¹ Goldkamp, *supra* note 2, at 27.

²² See, e.g., Angel et al., *supra* note 14; Andrew von Hirsch, *Prediction of Criminal Conduct and Preventive Confinement of Convicted Persons*, 21 BUFF. L. REV. 717, 725 (1972).

²³ Goldkamp, *supra* note 2, at 28.

As a result, more than a decade after passage of the Federal Bail Reform Act of 1984, the efficacy of preventive detention laws remains unknown. The conditions of vague definitions and unfalsifiability confound efforts to evaluate preventive detention. Precise definitions and standards of dangerousness are crucial to researchers interested in determining exactly what is being predicted so that they may establish whether the predictions are reliable. Ultimately, however, the efficacy of preventive detention schemes can only be established by a careful validation of the accuracy of the prediction methods used to make preventive detention decisions.²⁴ This poses the greatest challenge since legal and ethical issues in judicial decisions lead to the unfalsifiability problem. The only way to determine the accuracy of preventive detention predictions is to release defendants who are predicted to commit new crimes during the pretrial period in order to determine the precise degree to which they are risks for future crimes.

1. *Definitional Problems*

Preventive detention involves a short-term prediction of dangerousness, or the prediction of some future harm. However, many statutes fail to use precise definitions of pretrial danger;²⁵ the absence of definitional standards makes it difficult to determine what is being prevented, what is the type and magnitude of the harm predicted, and what is the predicted level of risk and the rate of that harm. The product of these variables constitutes "dangerousness."

The development of definitions of danger have focused on two concerns: danger to the public generally posed by the defendant, and danger posed to potential victims or witnesses. Most state laws that allow for preventive detention specifically refer to violent offenses. A few states and the District of Columbia include harm to or intimidation of witnesses and jurors, or broader concerns of possible interference with the judicial process as a component of pretrial danger.²⁶ Some statutes exclude particular types of defendants from pretrial release, such as those already on pretrial release for particular types of offenses or defendants on probation or parole for an earlier conviction.

The Supreme Court in *Schall* allowed the preventive detention of juveniles once a judge concluded that there was a "serious risk" that the juvenile would commit *any* crime, no matter how trivial, if re-

²⁴ von Hirsch, *supra* note 22, at 726.

²⁵ Goldkamp, *supra* note 2, at 22-28; Norval Morris & Marc Miller, *Predictions of Dangerousness*, 6 CRIME AND JUSTICE: AN ANNUAL REVIEW OF RESEARCH 1, 11 (1985).

²⁶ Goldkamp, *supra* note 2 at 18.

leased.²⁷ This breadth is obviously problematic. Several states allow for preventive detention of defendants under statutes that lack specific references to public safety concerns.²⁸ In *Salerno*, however, the Court upheld a rather specific preventive detention law which authorized detention only for the following crimes: (1) a crime of violence; (2) a crime punishable by life imprisonment or death; (3) a major drug offense; or (4) a felony committed by a person previously convicted of two of the crimes listed.²⁹ In *Salerno*, the Supreme Court characterized preventive detention as the "civil regulation of a dangerous person."³⁰ This definition of dangerousness encompasses three dimensions of criminal behavior: (1) chronicity; (2) assaultive behavior; and (3) particular crimes (in this case, drug offenses) that have been assigned a unique societal threat.

Most states define categories of defendants who are eligible for preventive detention. Eligibility entails a variety of criteria: charged offense, prior record, probation or parole status at the time of arrest, pretrial release status at the time of arrest, threats to witnesses or jurors following arrest, and risk assessments of "dangerousness." Such criteria speak more to descriptions of defendants rather than the harms or acts they are anticipated to commit. Although it is not the sole determinant for defining eligibility for denial of release, the severity of the current charge is the primary criterion in most states.³¹ However, the states vary widely in the scope of the current charge. Moreover, specificity in the designation of classes of defendants eligible for preventive detention does not make these statutes specific with respect to standards. Even when "danger" or "public safety" concerns are explicit, most states fail to provide operational standards or definitions for these constructs.

Accordingly, preventive detention statutes, even the most specific ones, are inadequate with respect to definitions and decision standards for detention.³² All agree that preventive detention is justified, if at all, when it succeeds at preventing pretrial violent crimes, including the threat of physical harm.³³ Because the base rate of violence is

²⁷ *Schall v. Martin*, 467 U.S. 253, 255 (1984).

²⁸ Goldkamp, *supra* note 2, at 20 n.18. In addition to persons charged with capital offenses, Texas judges may deny bail to persons charged with felonies who have two or more prior felony convictions and to persons charged with unspecified felonies while on pretrial release in connection with other unspecified felony charges. TEX. CONST. ART. I, §§ 11.11a. Similar statutes exist in Nebraska, NEB. CONST. art. I, § 9, New York, N.Y. CRIM. PROC. LAW § 510.30, and Nevada, NEV. REV. STAT. § 178.487.

²⁹ Bail Reform Act of 1984, 18 U.S.C. §§ 3141-56 (1988 & Supp. 1993).

³⁰ *United States v. Salerno*, 481 U.S. 739, 747-48 (1987).

³¹ Goldkamp, *supra* note 2, at 25.

³² von Hirsch, *supra* note 22, at 725-26.

³³ Morris & Miller, *supra* note 25, at 12.

low, researchers have predicted two effects of the use of preventive detention: over-incarceration (that is, confining people who would not have committed violence if released) and a modest reduction (on the order of one or two percent) in pretrial arrests for "dangerous" or violent crimes.³⁴

2. Legal Foundations

The theoretical and legal basis for preventive detention rests on the claim that courts can identify those who will commit future crimes during the pretrial period. This goes beyond the assertion that many criminals are recidivists, the basis for predictions of danger that was approved by the Supreme Court prior to *Schall*.³⁵ In *Jurek v. Texas*,³⁶ which upheld the use of prediction of future criminality for convicted murderers facing the death penalty, the Court emphasized that sentencing intrinsically involves a prediction of probable future conduct in determining what sentence to impose.³⁷ This is a long-term prediction of behavior over someone's lifetime. The *Schall* Court relied upon *Jurek* in reaching the very different conclusion that short-term predictions are attainable by using experts who are able to identify particularly dangerous individuals from a larger class.³⁸ However, predictions of dangerousness of competent persons over the extremely short pretrial detention period raise distinct issues for the state and for the individual from those raised by long-term predictions inherent in sentencing or civil commitment.³⁹

Although some commentators consider preventive detention to be a form of unregulated punishment,⁴⁰ the Supreme Court in both *Schall* and *Salerno* refused to concede that such detention constitutes any kind of punishment. The *Schall* Court concluded that detention to ensure a defendant's appearance in court serves a nonpunitive regulatory function.⁴¹ It is one thing, however, to label detention to en-

³⁴ See Angel et al., *supra* note 14, at 332.

³⁵ See, e.g., *Barefoot v. Estelle*, 463 U.S. 880 (1983), *Jones v. United States*, 463 U.S. 354 (1983); *Jurek v. Texas*, 428 U.S. 262 (1976).

³⁶ 428 U.S. 262 (1976).

³⁷ *Id.* at 272.

³⁸ 481 U.S. 739, 751 (1987) (quoting *Schall v. Martin*, 467 U.S. 253, 278 (1984)).

³⁹ See *Morris & Miller*, *supra* note 25, at n.1. In addition to *Jurek* and its rejection of the criticisms of the validity of short-term prediction, the *Schall* decision also invoked *parens patriae* to justify detention of juveniles. In so doing, the Court failed to recognize different types of juvenile wrongdoing, and conflated the status of juveniles under the law with notions of public safety and danger. The *Schall* decision even went so far as to condone prediction based on variables that could not readily be codified. *Id.*

⁴⁰ *Miller & Guggenheim*, *supra* note 18.

⁴¹ *Schall v. Martin*, 467 U.S. 253, 269 (1984) (citing *Bell v. Wolfish*, 441 U.S. 520 (1979)).

sure attendance at future judicial proceedings as purely "regulatory." The state unquestionably has the authority to ensure attendance at judicial proceedings as a necessary component of its judicial function. Adjudicating guilt and innocence and meting out appropriate punishment for guilty defendants plainly are regulatory functions in administering the justice system. The Supreme Court in *Salerno* regarded preventive detention as *civil* regulation of a "dangerous person."⁴² After using this convenient term, the *Salerno* Court concluded that "the Government's regulatory interest in community safety can . . . outweigh an individual's liberty interest."⁴³

3. Predictions of Defendant Risk

Morris and Miller distinguish between three types of prediction: "anamnestic," "actuarial," and "clinical."⁴⁴ It is not always clear which of these predictions best describes the judicial decisions in preventive detention. Although the predictions in *Schall* resembled clinical predictions made by judges, experts who looked at the New York scheme for assessing pretrial dangerousness criticized the predictions as more closely resembling "hunches" or "guesses."⁴⁵

Jurisdictions typically rely on three factors for determining pretrial dangerousness: prior criminal record,⁴⁶ seriousness of the current offense,⁴⁷ and judicial discretion.⁴⁸ However, there is little

⁴² U.S. v. Salerno, 481 U.S. 739, 747-48 (1987).

⁴³ *Id.* at 748. In upholding preventive detention in *Salerno*, the Court cited cases that approved the long-term, open-ended confinement of mentally unstable and dangerous persons within the *civil commitment structure*, including dangerous criminal defendants who were mentally ill and incompetent to stand trial. See, e.g., *Addington v. Texas*, 441 U.S. 418 (1979); *Jackson v. Indiana*, 406 U.S. 715 (1972); *Jones v. United States*, 463 U.S. 354 (1983).

⁴⁴ Morris and Miller, *supra* note 25, at 13, 14. *Anamnestic* predictions rely on past behavior in similar situations to predict the likelihood that the defendant will behave in the same way now. *Actuarial* predictions are based on assessments of how "similar" people, socially situated in the same contexts and possessing the same characteristics, have behaved in the past to predict how an individual will behave in the future. These predictions rely on objective criteria and make predictions about a class of persons who possess certain characteristics. *Clinical* predictions are made about a specific individual by an expert who knows something more about the individual than simply objective facts. Clinical predictions include elements of the anamnestic and actuarial predictions, but also incorporate judgments and diagnoses by psychological and psychiatric professionals trained in mental health and mental illness. Clinical predictions often are intuitive rather than verifiable.

⁴⁵ Leslie Wilkins testified as an expert witness in the trial phase of the *Schall* case that he "would be surprised if recommendations based on intake interviews were better than chance and assessed the judge's subjective prognosis about the probability of future crime as only four percent better than chance—virtually wholly unpredictable." 513 F. Supp. at 708.

⁴⁶ Twenty-one states, the District of Columbia, and the federal system, use this criterion. Toborg & Bellasai, *supra* note 2, at 108.

⁴⁷ Twenty states, the District of Columbia, and the federal system use this criterion, in

empirical evidence that these charge-related bases for detention are good indicators of criminality during the pretrial period.⁴⁹ Because judges must focus on the short-term danger posed by the defendant, they must rely on information about unproven prior acts and anticipated future conduct, as well as on subjective information of the personal restraints and social controls that will regulate the defendant's behavior if released. For this reason, juvenile court judges in *Schall* commonly considered such factors as the presence of family members at the detention hearing as an indication of the availability of familial controls during the pretrial period.⁵⁰

As applied, preventive detention reflects some combination of actuarial and clinical predictions. The actuarial component involves a complex framework of judicial experience and normative expectations derived from the accumulation of knowledge from decisions made over lengthy periods of pretrial decision-making. It also reflects a normative consensus among the court's everyday "working group" of decision-makers regarding particular individuals and types of cases.⁵¹ The clinical dimension of the preventive detention decision reflects the judges' professional opinion based on clinical elements that cannot be identified actuarially. These include judgments about the defendants' demeanor, dress, and perceptions of the quality of supervision from parents or caretakers.⁵² The *Schall* Court summed up this process as the amalgam of "experienced prediction based on a host of variable factors" that we recognize as a clinical prediction.⁵³

A crucial difference, of course, is that traditional clinical assessments by psychological professionals are rendered only after lengthy interviews and reviews of case records. Preventive detention decisions, by contrast, are made by judges often in a matter of minutes and fre-

combination with others. *Id.*

⁴⁸ See also Goldkamp, *supra* note 2, at 24.

⁴⁹ JOHN S. GOLDKAMP ET AL., A STUDY OF POLICY GUIDELINES: NATIONAL INSTITUTE OF CORRECTIONS (1981). One commentator who has surveyed the United States' laws on detention found that 27 jurisdictions authorize judges to distinguish dangerous defendants by assessing who is dangerous. Goldkamp, *supra* note 2, at 30.

⁵⁰ The deterrent component of pretrial detention is eliminated for juveniles since cash bail is not posted. Other deterrent threats underlying pretrial release involve the possibility that more stringent conditions may replace the original conditions, or that additional penalties may be imposed. See Goldkamp, *supra* note 2, at 48. Since pretrial flight is an unexpected behavior for juveniles and there is no possibility of forfeiture of cash bail, there are few conditions that can constitute a deterrent threat.

⁵¹ See, e.g., JAMES EISENSTEIN & HERBERT JACOB, FELONY JUSTICE (1983); ROBERT M. EMERSON, JUDGING DELINQUENTS (1969).

⁵² See EMERSON, *supra* note 51; ANNE MAHONEY, THE JUVENILE COURT IN CONTEXT (1987); KIMBERLY KEMPF ET AL., AN ANALYSIS OF APPARENT DISPARITIES IN THE HANDLING OF BLACK YOUTH WITHIN MISSOURI'S JUVENILE JUSTICE SYSTEM (1993).

⁵³ *Schall v Martin*, 367 U.S. 253, 274 (1984).

quently on the basis of unverified information. In *Barefoot v. Estelle*,⁵⁴ the Supreme Court noted that "psychiatrists and psychologists are accurate in no more than one in three predictions of violent behavior over a several year period among institutionalized populations that had committed violence in the past."⁵⁵ What may we expect when judges are asked to make short-term predictions about a heterogeneous group of defendants where information is sketchy and unverified regarding the elements that comprise risk?

4. *The Validity of Judicial Predictions of Dangerousness for Pretrial Defendants*

The benefit of testing the accuracy of judicial predictions has long been recognized, but the social and personal costs have seemed too high. Simply stated, once an individual has been determined to be dangerous by a judge, the safest recourse is to confine that person. Some studies have tested the accuracy of predictions by mental health personnel.⁵⁶ A number of studies have attempted to examine the predictive capacities of bail and pretrial detention by determining the amount of crime committed by persons on release status.⁵⁷ This research has been limited to pretrial rearrest rates of persons who have been released by courts on bail or on their own recognizance.⁵⁸ These studies have examined what persons released by courts have done during the pretrial period. However, the proposition that courts can identify criminal defendants who are likely to commit crimes before trial if released has never been directly subject to systematic study.⁵⁹ As a result, the claim that courts possess the ability to predict pretrial danger of arrestees has become an unfalsifiable assertion as preventive detention becomes more widespread: those deemed dangerous have been denied liberty during the pretrial period and not accorded an opportunity to commit crimes. No study has tested the accuracy of judicial predictions that defendants will recidivate when

⁵⁴ 463 U.S. 889 (1983).

⁵⁵ *Id.* at 900 n.7.

⁵⁶ *See, e.g.,* Baxstrom v. Herold, 383 U.S. 107 (1966).

⁵⁷ GOLDKAMP & GOTTFREDSON, *supra* note 20; ROTH & WICE, *supra* note 20; MARY A. TOBORG, PRETRIAL RELEASE ASSESSMENT OF DANGER AND FLIGHT: METHOD MAKES A DIFFERENCE (1984).

⁵⁸ GOLDKAMP & GOTTFREDSON, *supra* note 20; Angel et al., *supra* note 14.

⁵⁹ This is the first study to look at the activity of accused criminals for whom a prediction of commission of crimes was made but who nonetheless were released. Prior studies noted the impossibility of studying this group of persons because it was a null group. *See* Angel et al., *supra* note 14, at 306 n.29 (213 defendants in the study had to be excluded "because they were never on pretrial release and had no opportunity to commit bail crime.").

they are preventively detained.⁶⁰

Efforts to predict both pretrial crime and those defendants who will commit such crimes run headlong into base rate problems. Base rate estimates of pretrial crime are generally low⁶¹ and are especially difficult to compute for juveniles. Indeed, the base rate of pretrial crime among juvenile defendants is unknown and estimates based upon adult pretrial crime rates are problematic⁶² as studies of pretrial crime among adults vary depending on the classification of pretrial crime. The rate of pretrial *violent* crime for adults appears to be particularly low, ranging from 3% to 7%.⁶³ Toborg and colleagues reported a 7% pretrial rearrest rate for *violent* offenses among 3,000 District of Columbia defendants arrested in 1981 for violent offenses.⁶⁴ Analyses of more than 4,000 defendants released in Philadelphia between 1977 and 1979 revealed a pretrial rearrest rate for *serious* offenses of 6%.⁶⁵ Pretrial rearrest rates for *any* felony vary from 3%⁶⁶ to nearly 40%.⁶⁷

Base rates establish probabilities for defined groups,⁶⁸ but the epistemology of prediction provides extremely weak grounds for mak-

⁶⁰ The only study which comes even close is one conducted in 1962: Jonas R. Rappoport et al., *Evaluations and Follow-up of State Hospital Patients Who Had Sanity Hearings*, 118 AM. J. PSYCHIATRY 1079 (1962). They studied 73 patients who requested court hearings to obtain release from a psychiatric hospital. Forty-seven of these were remanded to the hospital by the court. Twelve of the 47 subsequently escaped. The investigation studied the community adjustment of these 12 individuals after at least one year. The study found that 42% of the escaped patients made a satisfactory adjustment to the community; they had not been in serious trouble with the law, had not been rehospitalized, and were caring for themselves. See Bruce Ennis & Thomas Litwack, *Psychiatry and the Presumption of Expertise: Flipping Coins in the Courtroom*, 62 CAL. L. REV. 593, 717 (1974).

⁶¹ See Miller & Guggenheim, *supra* note 18, at 318-405.

⁶² See Michael H. Tonry, *Prediction and Classification: Legal and Ethical Issues*, in PREDICTION AND CLASSIFICATION 367 (Don M. Gottfredson & Michael H. Tonry eds., 1987).

⁶³ Toborg & Bellasai, *supra* note 2, at 103.

⁶⁴ MARY A. TOBORG, PRETRIAL RISK ASSESSMENT IN THE DISTRICT OF COLUMBIA: THE EFFECTS OF CHANGED PROCEDURES (1984). Taking the definition of violent offenses from the District of Columbia statute, the researchers included murder, rape, carnal knowledge, indecent liberties with minors, mayhem, kidnapping, robbery, burglary, voluntary manslaughter, extortion with threats, arson, assault, and assault with a deadly weapon.

⁶⁵ JOHN S. GOLDKAMP ET AL., BAIL DECISIONMAKING: A STUDY OF POLICY GUIDELINES (1981). Serious charges were defined as homicide, rape, arson, robbery, burglary, aggravated assault, and manufacture, delivery, or sale of drugs.

⁶⁶ Lawrence Sherwood-Fabre, *An Experiment in Bail Reform: Evaluating Pretrial Release Service Agencies in Federal District Courts* 35-36, 39-40 (1984) (unpublished Ph.D. dissertation, Indiana University).

⁶⁷ Douglas Smith et al., *Drug Use and Pretrial Misconduct in New York City*, 5 J. QUANTITATIVE CRIMINOLOGY 101 (1989); John S. Goldkamp et al., *Pretrial Drug Testing and Defendant Risk*, 81 J. CRIM. L. & CRIMINOLOGY 585 (1990).

⁶⁸ David Farrington & Roger Tarling, *Criminological Prediction: The Way Forward*, in PREDICTION IN CRIMINOLOGY 20 (David Farrington & Roger Tarling eds., 1985). See also Toborg & Bellasai, *supra* note 2, at 116.

ing any prediction about a particular person, especially when the prediction is short-term. When base rates are low—as they appear to be for pretrial juvenile crime—the capacity to make accurate individual predictions of short-term criminality is particularly questionable. Several studies have estimated the accuracy of short-term predictions by using the statutory criteria for detention-eligible arrestees. These studies have concluded that the criteria for detention eligibility is a poor predictor of who will commit a crime during the pretrial period.⁶⁹ There is general consensus that the capacity to predict pretrial crime on the basis of statutory standards for determining dangerousness is no better than one in three correct predictions.⁷⁰

The problems are different when base rates are high. In these circumstances, the difficulty involves developing bases to make predictions that improve on randomness. The difficulty of predicting events increases as the base rate falls below 50%.⁷¹ Because violent criminality is a rare event, the establishment of a valid base expectancy rate is critical. When the “true” rate of pretrial violence is one-in-ten, a one-in-three prediction is not a low rate of prediction. In fact, it would be quite high relative to the actual base rate. But a one-in-three prediction is poor relative to a 50% base rate. Even when the base rate is relatively high for a particular group, predicted future dangerousness will vary dramatically within the group.⁷² For this reason, the assignment of a threshold for an individual becomes a critical decision in determining which members of the group pose a sufficient risk to justify preventive detention. Given the low base rates of pretrial juvenile crime, the reduction in crime through preventive detention is likely to be quite low unless this threshold is set unreasonably low, close to the low base rate.

In general, predictions of pretrial failure invariably fail to improve on either chance or on the base rate.⁷³ The Supreme Court acknowledged in *Barefoot v. Estelle* that no study has predicted *future* criminal behavior for any group over any length of time at greater

⁶⁹ Angel et al., *supra* note 14, at 324-30; Torborg & Bellasai, *supra* note 2, at 104; GOLDKAMP & GOTTFREDSON, *supra* note 20.

⁷⁰ Torborg & Bellasai, *supra* note 2, at 104. See also Morris & Miller, *supra* note 25, at 14; JEAN FLOUD & WARREN YOUNG, DANGEROUSNESS AND CRIMINAL JUSTICE (1981); JOHN MONAHAN, THE CLINICAL PREDICTION OF VIOLENT BEHAVIOR (1981); *Barefoot v. Estelle*, 463 U.S. 880, 900 n.7 (1983).

⁷¹ See, e.g., Paul E. Meehl & Albert Rosen, *Antecedent Probability and the Efficiency of Psychometric Signs, Patterns, or Cutting Scores*, 52 PSYCHIATRY BULL. 194 (1955); Farrington & Tarling, *supra* note 68, at 20.

⁷² Don M. Gottfredson, *Prediction and Classification in Criminal Justice Decision Making*, in PREDICTION AND CLASSIFICATION, *supra* note 62.

⁷³ Stephen E. Gottfredson, *Prediction: Methodological Issues*, in PREDICTION AND CLASSIFICATION, *supra* note 62.

than one accurate prediction for every two inaccurate predictions.⁷⁴ These problems are even more acute for the short-term predictions inherent in preventive detention. Jackson's review of preventive detention notes that "[t]hree noteworthy findings emerge from studies: (1) arrests of pretrial releasees for serious crimes are relatively infrequent; (2) the ability to accurately predict pretrial crime, however measured, is very poor; and (3) the level of pretrial crimes correlates positively with time on release."⁷⁵

Finally, whether rearrest rates alone confirm pretrial crime has been disputed. Rearrest rates may be underinclusive because they do not reflect undetected crimes.⁷⁶ However, at the same time, they may be overinclusive because they equate an arrest with guilt.⁷⁷ While the number of actual crimes by active offenders may exceed their arrests, there is no basis to conclude that nonarrested juveniles are committing undetected crimes at similar rates, or even any crimes at all. In fact, only about half of those arrested are usually convicted, and often for an offense that is not the primary concern of dangerousness statutes.⁷⁸ For example, only 40% of those rearrested while on pretrial release in the District of Columbia were subsequently convicted of the crime for which they were rearrested.⁷⁹ Moreover, the detection and apprehension of crimes reflects contingencies unrelated to the criminal event, often tied to a suspect's neighborhood of residence and policing practices in that area.⁸⁰ Nonetheless, rearrest is the only easily obtained and the only legally relevant measure of pretrial criminality.⁸¹ Any other measure or construction, including the use of coefficients to factor in undetected crime and factor out wrongful arrests, involves a level of interpretation that is impossible to resolve satisfactorily and fairly.

⁷⁴ *Barefoot v. Estelle*, 463 U.S. 880, 900 n.7 (1983) (citing JOHN MONAHAN, *THE CLINICAL PREDICTION OF VIOLENT BEHAVIOR* 47-49 (1981)).

⁷⁵ Patrick Jackson, *The Impact of Pretrial Preventive Detention*, 12 JUST. SYS. 305, 307 (1987).

⁷⁶ THOMAS LITWACK ET AL., *THE ASSESSMENT OF DANGEROUSNESS AND PREDICTIONS OF VIOLENCE: RECENT RESEARCH AND FUTURE PROSPECTS* (1991).

⁷⁷ Miller & Guggenheim, *supra* note 18, at 403-404. See also Tonry, *supra* note 62.

⁷⁸ STEPHEN CLARKE ET AL., *THE EFFECTIVENESS OF BAIL SYSTEMS: AN ANALYSIS OF FAILURE TO APPEAR IN COURT AND REARREST WHILE ON BAIL* (1976); GOLDKAMP & GOTTFREDSON, *supra* note 20; Angel et al., *supra* note 14, at 309; Charles E. Ares et al., *The Manhattan Bail Project: An Interim Report on the Use of Pretrial Parole*, 39 N.Y.U. L. REV. 67 (1963); ROTH & WICE, *supra* note 20.

⁷⁹ ROTH & WICE, *supra* note 20, at vi, II-48-51.

⁸⁰ See, e.g., Douglas Smith, *The Neighborhood Context of Police Behavior, in COMMUNITIES AND CRIME* 313 (Albert J. Reiss, Jr. & Michael Tonry eds., 1986).

⁸¹ See Miller & Guggenheim, *supra* note 18, at 403. See also Jackson, *supra* note 75, at 307 ("Most studies of this subject are based on rearrest data, which may understate actual criminal activity, overstate probable criminal behavior, or both.").

5. *The Problems of False Positives and False Negatives*

Finally, the statutory authority for preventive detention in the *Schall* case empowered judges to detain defendants whenever the judge considered their risk of criminality to be high, recognizing that at least in some instances, the juvenile would not commit any crime. The assessment of these predictions is especially important because it provides an estimate of the number of persons detained unnecessarily in order to prevent crime. The threshold at which the number of needlessly detained individuals becomes *too high* is not reducible to a mathematical formula. But it may be useful to view *false positives* as individuals who are deprived of their liberty for utilitarian purposes unrelated to their own danger. Once these individuals are considered to be among a larger group of the "potentially dangerous," they are subject to loss of liberty not because their potential will be realized, but because an indeterminate number of the group will realize theirs.

Accordingly, unconvicted individuals are jailed not to stop them from any wrongdoing but in order to throw a wide enough net to cover others who, if not stopped, would endanger society. It is one thing, *after* conviction, to deprive someone who is no threat to society of his or her liberty for utilitarian purposes.⁸² In those circumstances, the convicted person has forfeited liberty based on his or her wrongdoing. But *before* conviction, it is difficult to discern how the individual has forfeited anything. The only thing he or she has done, at this point in the criminal justice process, is get arrested.⁸³

The recurring errors in predictions must always be balanced by two additional considerations. First, does the cost of trying to prevent pretrial crime outweigh the benefits? Here, the problems of definition and prediction intersect. For these purposes, dangerousness is the product of the crime to be avoided and the predicted rate or odds of its occurrence.⁸⁴ When base rates are low, so is the probability that

⁸² See Note, *Rules For An Exceptional Class: The Commitment and Release of Persons Acquitted of Violent Offenses by Reason of Insanity*, 57 N.Y.U. L. REV. 281, 287 (1982) (distinguishing between detaining someone for what they have done in the past and detaining someone for what they might do in the future).

⁸³ See Anthony Bottoms & Roger Brownsword, *Dangerousness and Rights*, in DANGEROUSNESS: PROBLEMS OF ASSESSMENT AND PREDICTION 10 (John W. Hinton ed., 1983) (arguing that if ever preventive confinement on utilitarian grounds is permissible, four distinct qualities must be considered: the *seriousness* of the danger (i.e. the degree of injury is contemplated), *temporality* (how frequent), *immediacy* (how soon), and *certainty* (how sure are we). See also von Hirsch, *supra* note 22, at 740 ("[I]f a system of preventive incarceration is known systematically to generate mistaken confinements, then it is unacceptable in absolute terms because it violates the obligation of society to *individual* justice. Such a system cannot be justified by arguing that its aggregate social benefits exceed the aggregate amount of injustice done to mistakenly confined individuals.").

⁸⁴ Morris & Miller, *supra* note 25, at 11.

the harm to be avoided would occur. Even within a group where base rates may be higher, the ceiling on predictions within those groups—for example, at one-in-three, as the Supreme Court suggested in *Barefoot v. Estelle*—indicates that the total harm is likely to be insubstantial. When the base rates are actually far lower—for example, one-in-ten as reported in the assessment of the District of Columbia preventive detention statute⁸⁵—the total harm is extremely low, especially when the harm to be avoided is ill-defined and subject to overreach.

In the case of pretrial juvenile defendants, the costs both to the detained adolescent and to his or her community are quite high in terms of foreshadowing their eventual finding of delinquency and serious disposition. Detention causes considerable adverse impact on the detainee, including loss of employment or educational opportunities, separation from family, persistent future disadvantage in the workplace that results in poor job outcomes, and the ordinary inconveniences of being jailed.⁸⁶ Pretrial detention of juveniles also has a negative impact on the outcome of the case in court.⁸⁷ The conviction rate of detainees is higher, and because detainees are prevented from demonstrating improved behavior in the community, prison sentences are lengthier and more likely.⁸⁸ Several studies have concluded that “detention *per se* exhibits an independent effect on dispositions In operation, detention almost randomly imposes punishment on some juveniles for no obvious reason and then punishes them again for having been punished before.”⁸⁹ This bias seems particularly acute for juveniles:

Detention undermines the fairness of the criminal process in numerous ways. The state’s assumption of guilt inherent in detaining before trial becomes a self-fulfilling prophecy. Those detained are more likely to plead guilty, to be convicted if tried, and to receive a prison sentence. Conversely, those released are less likely to plead guilty.⁹⁰

The extent to which false positive and false negative problems exist depends on the accuracy of predictions. Proponents of predictive efficacy minimize the problem of false positives by arguing that defendants are actually involved in more crimes than the police can

⁸⁵ Angel et al., *supra* note 14, at 317.

⁸⁶ ROBERT J. SAMPSON & JOHN H. LAUB, *CRIME IN THE MAKING* (1993); Robert B. Freeman, *Crime and the Economic Status of Disadvantaged Young Men*, in *URBAN LABOR MARKETS AND JOB OPPORTUNITIES* 201 (George E. Peterson & Wayne Vroman eds., 1992).

⁸⁷ Charles E. Frazier & Donna M. Bishop, *The Pretrial Detention of Juveniles and Its Impact on Case Dispositions*, 76 *J. CRIM. L. & CRIMINOLOGY* 1132 (1985).

⁸⁸ Ares et al., *supra* note 78, at 76; Anne Rankin, *The Effect of Pretrial Detention*, 39 *N.Y.U. L. REV.* 641, 642 (1964).

⁸⁹ Barry C. Feld, *Right to Counsel in Juvenile Court: An Empirical Study If When Lawyers Appear and the Difference They Make*, 79 *J. CRIM. L. & CRIMINOLOGY* 1185, 1338 (1985).

⁹⁰ Miller & Guggenheim *supra* note 18, at 416 (footnotes omitted).

detect. Proponents also exaggerate the problem of false negatives by assigning a greater weight to these risks than to the costs of other types of error. These arguments persist only because empirical research has not yet tested the precise levels of predictive accuracy. In turn, the assertions that informed the *Schall* and *Salerno* decisions will remain unfalsifiable: "The scientific work necessary to define a group and to assess its base expectancy rate of criminal violence within a given period has not been done."⁹¹ Who then will form a comparison group against which one arrested person's higher base expectancy rate of dangerousness can justify his detention? Will it be other persons arrested for a crime of similar gravity and with similar records? On what standard shall we judge the accuracy of judicial predictions of dangerousness? Morris & Miller suggest that:

the base expectancy rate of violence for the criminally-predicted as dangerous must be shown by reliable evidence to be substantially higher than the base expectancy rate of another criminal with a closely similar criminal record and [convicted] of a closely similar crime but not predicted as unusually dangerous.⁹²

We agree, and such tests form the basis of the following experiment.

B. THIS STUDY

The litigation that led to the *Schall* decision created the circumstances for a natural experiment to test the validity of judicial predictions of dangerousness for juvenile offenders. On June 1, 1981, a federal judge enjoined the preventive detention of juvenile offenders in New York State. The *habeas corpus* writ was issued pursuant to New York Family Court Act § 320.5(3)(b),⁹³ on behalf of all accused juvenile delinquents⁹⁴ who were at that time or who may in the future be detained in the custody of the New York City Commissioner of Juve-

⁹¹ Morris & Miller, *supra* note 25, at 20.

⁹² *Id.* at 37.

⁹³ The subsection in its entirety reads:

The court shall not direct detention unless it finds and states the facts and reasons for so finding that unless the respondent is detained:

(a) there is a substantial probability that he will not appear in court on the return date; or

(b) there is a serious risk that he may before the return date commit an act which if committed by an adult would constitute a crime.

N.Y. FAM. CT. ACT § 320.5(3)(a)(b) (1983). Only the power to detain to prevent crime was in issue in the federal lawsuit.

⁹⁴ United States ex rel. Martin v. Davis, 513 F. Supp. 691 (S.D.N.Y. 1981), *aff'd sub nom.* Martin v. Strasburg, 689 F.2d 365 (2d Cir. 1982), *rev'd sub nom.* Schall v. Martin, 476 U.S. 253 (1984). In New York, a juvenile delinquent is a person over seven and less than 16 years of age who committed an act that would constitute a crime if committed by an adult but who is not criminally responsible for such conduct by reason of infancy. N.Y. FAM. CT. ACT § 301.2 (1983).

nile Justice. That section authorized the preventive confinement of accused juveniles whenever a judge concluded that there was a "serious risk" the juvenile would commit a crime during the pretrial period.

The continuing writ of *habeas corpus*, issued at the trial level of *Schall v. Martin*, was in effect for three years. The order declared the New York statute authorizing preventive detention unconstitutional.⁹⁵ However, the district court order only enjoined the Commissioner of Juvenile Justice from detaining any juvenile ordered into detention pursuant to the preventive detention statute.⁹⁶ Judges remained free to rely on the statute when making detention decisions.⁹⁷ Whenever a judge ordered a juvenile to be detained solely for preventive detention purposes, the juvenile was released from custody by the Commissioner of Juvenile Justice without spending any time in the juvenile detention facility.⁹⁸ Altogether, seventy-four known juveniles were released in this fashion during the three years,⁹⁹ presenting the opportunity to test empirically the assertion in *Schall* that predictions of

⁹⁵ The power to detain accused delinquents to ensure their appearance at trial was undisturbed by the federal court order. See N.Y. FAM. CT. ACT § 320.5(3)(a) (1983). Many juveniles continued to be detained for that reason during this three year period. However, no juveniles were preventively detained in New York City from June 1, 1981 to June 4, 1984.

⁹⁶ The federal case was brought as a class action writ of *habeas corpus* pursuant to 28 U.C.S. § 2254(b) (1988). The named respondent was the jailor of the class, the Commissioner of Juvenile Justice. No judge was a named party to the action. Although the lawsuit was centrally about the power of judges and their ability to predict behavior, the final order issued by the district court, the writ of *habeas corpus*, only directly affected the Commissioner of Juvenile Justice. Judges, not being parties to the lawsuit, were not enjoined from using the statute declared to be unconstitutional.

⁹⁷ The declaration of unconstitutionality by the federal district court was in direct conflict with a decision rendered by New York's highest court in 1976. In *People ex rel. Wayburn v. Schupf*, 39 N.Y.2d 682 (N.Y. 1976), the Court of Appeals upheld the preventive detention statute against an identical attack which was successful in federal court. This conflict meant that judges sitting in the Family Court in 1981 after the federal decision was handed down were free to continue to follow their own state's highest court decision and carry on business as if the detention statute was still valid. This is what happened on at least 74 occasions. See *infra* note 99 and accompanying text.

⁹⁸ By an arrangement between the plaintiffs' lawyers and the Commissioner of Juvenile Justice's office, whenever an attorney believed that a judge had ordered his or her client to be detained preventively, the attorney would speak with counsel for the Commissioner of Juvenile Justice, who would make an investigation. If counsel for the Commissioner determined that the juvenile had been ordered into detention solely for preventive purposes, she would direct that the juvenile be released immediately. In most cases, this determination was made before the juvenile even was put on the bus from the courthouse. In no such case did the juvenile spend any time in the detention facility.

⁹⁹ There were a larger number of juveniles who were ordered preventively detained. But this larger group consisted of juveniles who were also detained to ensure their appearance at trial. Because the power to detain for that purpose was unaffected by the federal order, those juveniles were not released.

dangerousness are attainable.

Thus, the restraining order created the conditions for a natural experiment testing the validity of judicial predictions of dangerousness—the release of a cohort of defendants predicted to be dangerous and ordered into incarceration, but not incarcerated.¹⁰⁰ A consistent decision standard and a consistent set of decision-makers were employed in a small number of courts that ordered preventive detention, and the defendants were released prior to their incarceration.

II. METHODS

A. SAMPLES

Samples included (N=74) juveniles from the Brooklyn and Queens Family Courts in New York City. The juveniles were remanded to custody under the preventive detention statute of the New York Family Court Act during 1981 to 1984, and subsequently released within hours of the detention order pursuant to an injunction obtained in the federal district court for the Southern District of New York.¹⁰¹

Schall cases were identified through a procedure that required confirmation by three parties involved in the detention decision. First, judges noted in court minutes that detention was ordered preventively. The judicial order for detention was based on a judicial conclusion that “there [was] a serious risk that [the juvenile] may before the return date commit an act which if committed by an adult would constitute a crime.”¹⁰² This judicial finding of serious risk is analogous to a prediction of future behavior. Second, this status was confirmed by attorneys for the prosecuting agency for delinquency petitions in Family Court. Third, when the juvenile was remanded to the custody of the detention authority, counsel for the detention authority validated that this was a *Schall* case. Once validated, the juveniles were released at the courthouse or the detention facility instead of being admitted into the facility.

We assessed the validity of judicial predictions of dangerousness in two ways. First, the arrest histories of the *Schall* cases were examined to determine whether predictions of dangerousness during the pretrial period were accurate. Second, the base rates of rearrest

¹⁰⁰ Jeffrey Fagan, *Natural Experiments*, in MEASUREMENT ISSUES IN CRIMINOLOGY 103, 133 (1990).

¹⁰¹ United States ex rel. Martin v. Davis, 513 F. Supp. 691 (S.D.N.Y. 1981), *aff'd sub nom.* Martin v. Strasburg, 689 F.2d 365 (2d Cir. 1982), *rev'd sub nom.* Schall v. Martin, 476 U.S. 253 (1984) [hereinafter, the *Schall* cases].

¹⁰² N.Y. FAM. CT. ACT § 320.5(b) (1983).

were examined for a matched sample of juvenile offenders drawn from the time period when the *Schall* injunction was in effect. This group was identical to the *Schall* group and provided an estimate of the marginal gain in predictive efficiency from the judicial determination of dangerousness. These offenders were not detained during the pretrial period.

The control group was constructed using a matched-cases procedure. Matching criteria were selected from the results of principal components analyses that determined the legal (offense, prior record) and social characteristics that typified the *Schall* sample. The criteria also were selected to control for social structural factors that are associated with base rates of offenses and arrests. Five variables were identified as matching variables: age, race, gender, committing offense, and prior record (total prior court referrals, prior referrals for violence). The defendant's census tract was added as an additional matching criterion to control for social area characteristics and deployment of police patrol services. Incomplete data for five *Schall* cases and ten control cases required their deletion from the sample. Table 1 shows the characteristics of the final *Schall* and control samples.

Most offenders were males (over 92%), African-American (about 60%), and 14.5 years of age at the time of the sample arrest. About one-in-three were charged with a violent offense, and over half were charged with non-violent felony offenses.¹⁰³ One-in-ten had no prior record. Defendants with at least one prior apprehension had an average of three prior apprehensions. Over 45% had at least one prior apprehension for a violent offense. Among both *Schall* and control cases, four-in-ten (42.9%) had neither a prior nor a current charge for a violent felony offense, suggesting that the assessment of their "dangerousness" was unrelated to their involvement in violent crimes.

There were no significant differences in any of the social or legal characteristics of the groups. *Schall* and control cases differed only on the judicial determination of risk that the accused would commit a crime if released. The bases for this determination may be reflected in data not available systematically: the defendant's physical appearance and demeanor in the courtroom, the presence of a family member at the detention hearing, presence or use of weapons, or injury to victims.

¹⁰³ Violent offenses included any grades of crimes against persons that was punishable by a term in prison, if committed by an adult: robbery, assault, manslaughter, rape or sodomy, homicide, kidnap, or attempts of any of these crimes. Other offenses punishable by a term in state prison, if committed by an adult, were classified as other felonies.

Table 1
 SOCIAL AND LEGAL CHARACTERISTICS OF *SCHALL* AND
 CONTROL SAMPLES

	<i>SCHALL</i>	CONTROL
N	69	64
CURRENT CHARGE (%)		
Violent Felony	36.9	37.5
Other Felony	50.8	54.7
Misdemeanor, PINS	12.3	7.8
PRIOR RECORD		
% First Apprehension	11.6	10.9
Mean No. Priors ^a	2.9	2.8
% Prior Charges for Violence	47.8	44.4
AGE (years)		
At Initial JJS Contact	13.7	13.7
At Current Incident	14.5	14.4
SEX (%)		
Male	92.8	92.2
Female	7.2	7.8
RACE (%)		
African American	60.3	59.4
Non-Hispanic White	13.2	12.5
Hispanic	23.5	25.0
Asian	2.9	3.1

^a For those with at least one prior charge

B. DATA AND MEASURES

Social and legal histories were constructed for the *Schall* and control samples from official records in the Kings County (Brooklyn) and Queens County Family Courts in New York City, and the City Probation Department and the Department of Juvenile Justice (the detention authority). Social histories were limited to social structural characteristics since other information (defendants' family composition, school performance, and other social behaviors) was not uniformly available from any of the data sources.

Complete juvenile and criminal histories were compiled for the interval from the subject's first family court appearance through October 31, 1987; those histories were segmented for the periods preceding and following the sample arrest. Family court histories were constructed from the same data sources. Adult criminal histories were constructed from two sources: New York City criminal court arraignments and state criminal justice records. Criminal history information included the dates, charges, and dispositions of all court appearances.

Rearrests for PINS offenses or outstanding warrants were excluded since no new crime was alleged.

C. TEMPORAL CRITERIA FOR PREDICTIVE EFFICACY

To validate the prediction inherent in preventive detention, we must be concerned about which crimes might happen in what time interval, should the accused be released. The period of time for which the prediction applies will vary depending on the court system within which the case is located. Definitionally, the maximum time period for pretrial detention is the maximum time period within which the trial must occur. In most adult criminal courts, the speedy trial period is six months.¹⁰⁴ Accordingly, the period of time over which the prediction is being made should be the period of time within which a trial must be held if the individual is *released*.

In New York, the juvenile detention statute expressly authorizes a court to detain preventively if it concludes there is a serious risk that the juvenile may "before the return date" commit a crime. Pretrial detention may be extremely short—as short as three days and as long as seventeen days; whenever a juvenile is detained before trial in New York, trials must take place as soon as three days after the confinement begins for less serious crimes and within seventeen days for the most serious cases.¹⁰⁵ In New York City, the adjourned date in a delinquency case after an arraignment, *when a juvenile is released*, is commonly between four and six weeks.¹⁰⁶ Even the four to six week period in New York is too short. Cases commonly are adjourned for trial when the juvenile returns to court for the first time after arraignment. When cases are adjourned in this subsequent appearance, ordinarily no new facts about the juvenile's out-of-court conduct will be presented. If the juvenile is on release status for this appearance, he or she virtually always will remain in that status until the trial.

For these reasons, the fairest measure of time within which a judge should be concerned with the juvenile's out-of-court behavior is the maximum time within which the trial must occur—the period

¹⁰⁴ WAYNE R. LAFAVE & JEROLD ISRAEL, CRIMINAL PROCEDURE § 18.3(c) (1984).

¹⁰⁵ N.Y. FAM. CT. ACT § 340.1 (1983). The statute requires that the trial commence within 14 days. *Id.* § 340.1(1). But it allows the court to delay the start of the trial for an additional three days on its own motion or on motion of the prosecutor. *Id.* § 340.4(a). Indeed, this period is for the most serious offenses. For misdemeanors and low level felonies, the trial must begin within six days of detention. *Id.* § 340.1(1) (stating that the trial must start within three days but permits the same three day adjournment just described, thus providing a total of six days). The juvenile in detention may delay the start of the trial "on good cause shown" for an additional 30 days. *Id.* § 340.4(b).

¹⁰⁶ Telephone communication with Professor Randy Hertz of New York University School of Law, May 1, 1995.

from arraignment through the trial. Once the trial has been held, one of two things will occur which will materially change the status of the accused. If the accused is acquitted, the court's power to detain evaporates, even if there still remains reason to believe there is a "serious risk" that he or she will commit a crime. If the accused is convicted, the presumption of innocence has been overcome. If detention is continued, it no longer is pretrial. Detention after conviction, even before final sentencing, may be for punitive purposes.¹⁰⁷ In New York City, the period from initial court appearance through final disposition for delinquency petitions is ninety days.¹⁰⁸ Accordingly, the *Schall* and control groups were compared for all rearrests and specifically for violent offenses within ninety days. To further assess the validity of predictions of dangerousness, we have also looked at rearrests beyond ninety days.

D. STATUTORY CRITERIA FOR PREDICTIVE EFFICACY

Under the Federal Bail Reform Act, and in many states, confinement to prevent future crimes signifies a judicial determination of "dangerousness."¹⁰⁹ The Bail Reform Act, for example, limits those eligible for preventive detention to persons charged with one of the following: a "crime of violence"; a federal drug offense carrying a penalty of ten years or more; any felony following convictions on two or more offenses of these types; an offense carrying a penalty of life imprisonment or death; two or more comparable state or local offenses;

¹⁰⁷ See *Bell v. Wolfish*, 441 U.S. 520, 535 (1979) (punishment *before* trial is constitutionally forbidden).

¹⁰⁸ N.Y. FAM. CT. ACT § 340.1 provides that the trial must commence within 60 days when the juvenile is not detained. However, an adjournment for an additional 30 days is permissible. *Id.* Thus, the total period is 90 days. Any adjournment beyond that period is justified only by a showing of "good cause" or "special circumstances," which is not granted lightly. In *re Frank C.*, 512 N.Y.S.2d 89 (N.Y. 1987). Lower courts have interpreted *Frank C.* very strictly and the practice in the New York City Family Courts is to commence virtually all delinquency trials within 90 days of the arraignment or the cases are dismissed or otherwise settled. See *In re Vincent M.*, 512 N.Y.S.2d 54, *aff'd*, 70 N.Y.S.2d 793 (N.Y. App. Div. 1987).

¹⁰⁹ Goldkamp, *supra* note 2. A different statute, unchallenged in the underlying litigation which served as the background for this study, authorized judges to detain juveniles to assure their presence at trial. N.Y. FAM. CT. ACT § 320.5(3)(a) (1983). This traditional ground for requiring the posting of bail is outside of this study. Whenever a judge ordered a juvenile to be detained both because the judge concluded that detention was necessary to assure the juvenile's presence at trial *and* because of the risk that the juvenile would commit a crime if released, that juvenile was detained since there was no impediment to the Commissioner of Juvenile Justice accepting a juvenile into detention in order to assure the juvenile's presence at trial. Only "pure" *Schall* cases were involved in this study. That is, only those cases in which the *sole* justification for the detention order was the judge's assessment of future crime risk.

or a combination of such offenses.¹¹⁰ These more narrowly focused laws invariably limit detention to prevent only serious, violent felonies (using such phrases as “dangerous crimes” or “crimes of violence”).

A problem with the “dangerous” label is its overbreadth as applied in this study. In the *Schall* cases, judges were empowered to order detention whenever they believed there was a risk the juvenile would commit *any* “act which would constitute a crime,” including non-violent low-level misdemeanors, as well as behaviors that may expose the juvenile to harm. Many such acts, of course, fall well below the definition of dangerousness. The New York Family Court statute uses an expansive and far-reaching definition of “dangerousness” that includes not only violence but the threat of any violation of penal code statutes. During the period when the *Schall* injunction was in effect, it is unclear the degree to which judges ordered detention to prevent non-violent crimes, or simply to assure the health and welfare of the juvenile. In fact, Table 1 shows that the term “dangerousness” may be overly broad as applied to these cases.

Although the expansiveness of the Family Court statute presages a high prediction rate,¹¹¹ particular attention is paid in this study to violent acts because most preventive detention schemes¹¹² are more narrowly focused than the New York statute authorizing detention for juveniles. Accordingly, we use dangerousness as the criterion variable to assess predictive validity in this study and operationalize it to include violent felony offenses.

III. RESULTS

A. REARRESTS WITHIN 90 DAYS

Table 2 shows that *Schall* defendants were more likely to be rearrested within the ninety day period, regardless of the type of rearrest. Over 40% of the *Schall* defendants were rearrested within ninety days, compared to only 15.6% of the controls ($\chi^2= 16.18$, $p = .006$). For violent offenses, 18.8% of the *Schall* defendants were rearrested, compared to 7.8% of the controls ($\chi^2= 6.82$, $p=.033$). Evidently, for all rearrests, judges accurately identified a group of defendants that posed a higher risk of subsequent rearrest during the ninety day pe-

¹¹⁰ 18 U.S.C. § 3142(f) (1988).

¹¹¹ Obviously, it is easier to predict that an individual will commit any crime than it is to predict that an individual will commit a narrow range of crimes because the former prediction includes many more acts. Predicting that an individual will commit any of 100 acts, for example, will be true more often than predicting that he or she will commit any of 10 acts.

¹¹² See, e.g., Federal Bail Reform Act of 1984, 18 U.S.C. § 3141-3156 (1988 & Supp. 1993).

riod when their cases typically reached conclusion.

Table 2
PERCENT ARRESTED WITHIN 90 DAYS BY SEVERITY OF REARREST CHARGE

	REARREST CHARGES			
	ANY OFFENSE		VIOLENT FELONY	
	<i>Schall</i>	Control	<i>Schall</i>	Control
N	69	64	69	64
% Rearrested within:				
0 - 90 Days	40.6	15.6	18.8	7.8
More than 90 days	42.0	57.8	53.6	45.3
Not Rearrested	17.4	26.6	27.5	46.9
Statistics				
Chi square		10.18		6.82
df		2		2
p		.006		.033

The marginal gain in predictive efficiency for the *Schall* cases is tempered by the high rate of false prediction evident in Table 2. Nearly six-out-of-ten (59.4%) of the *Schall* defendants were not rearrested within the ninety day period, compared to about five-out-of-six (84.4%) of the control cases. When violent felony offenses are applied as the standard for evaluating preventive detention decisions, consistent with the Bail Reform Act criteria for dangerousness, the false prediction rate for judicial decisions rises. More than eight-in-ten (81.2%) *Schall* defendants were not rearrested for violent offenses during the ninety day period, compared to more than nine-in-ten (92.2%) control cases. Accordingly, while predictions of subsequent *crime* within ninety days are effective, predictions of *violence* or *danger* are less accurate.

Statutes authorizing preventive detention commonly mention violence as a decision standard for assessing pretrial danger.¹¹³ After controlling for evidence of violence in both the current charge and prior violence, the results suggest even more modest differences. For rearrests for *any* offense, Table 3 shows significant differences only for any rearrest; for violent felonies, differences exist with those current charges. Of the *Schall* defendants with both current and prior violence charges, 58.8% were rearrested for *any* crime within ninety days, compared to 20% of the controls ($p[\chi^2]=.040$). None of the control defendants charged with violent crimes but with no history of violence were rearrested, compared to 41.7% of the *Schall* cases ($p[\chi^2]=.027$).

¹¹³ See Goldkamp, *supra* note 2, at 69-70 tbl. 7.

For rearrests for *violent* offenses, the comparisons failed to produce significant differences.

For defendants charged with other felonies, there were no significant differences in rearrest within ninety days, regardless of prior record or type of rearrest. For defendants charged with misdemeanors, few were rearrested within the ninety day period. In fact, the rearrest rates within ninety days were zero for nearly all groups. The results show that even when defendants meet statutory standards for past dangerousness, predictions of their future dangerousness are unreliable.

Table 3
PERCENT REARRESTED WITHIN 90 DAYS BY TYPE OF REARREST CHARGE,
CONTROLLING FOR PRIOR VIOLENCE AND CURRENT CHARGES

	REARREST CHARGES						
	ANY OFFENSE			VIOLENT FELONY			
	<i>Schall</i>	Control	p(χ^2)	<i>Schall</i>	Control	p(χ^2)	
N	69	64		69	64		
Current Charge							
Violent Felony							
No Prior Violent		41.7	0	.027	16.7	0	a
Prior Violent	58.3	20.0	.040	33.3	13.3	.215	
Other Felony							
No Prior Violent		36.8	17.9	.143	21.1	7.1	.161
Prior Violent	57.1	28.6	.213	21.4	14.3	.694	
Misdemeanor, PINS							
Prior Violent	14.3	0	a	0	0	a	
No Prior Violent		0	0	a	0	0	a

^a Empty cells, no statistics computed

B. TIME TO FIRST REARREST

Comparisons were made between the time of the first rearrest during the pretrial period to rearrests for either any offense or violent crimes. The analyses controlled for the severity of the current and past charges as well as the total number of prior court referrals. Only defendants with one or more rearrests were included in the analyses. The results are shown in Table 4.

Schall youths were rearrested more quickly than the controls for both violent offenses and all offenses. The marginal gain in predictive efficiency was significant and consistently high when *Schall* failure rates are compared to controls, regardless of current or prior charges. The mean failure time for any offense for *Schall* defendants charged

Table 4
 DAYS TO FIRST REARREST BY TYPE OF REARREST CHARGE, CONTROLLING
 FOR PRIOR AND CURRENT CHARGES (MEAN, N, ANOVA)

	REARREST CHARGES			
	ANY OFFENSE		VIOLENT FELONY	
	<i>Schall</i>	Control	<i>Schall</i>	Control
Current Charge				
Violent Felony				
No Prior Violent	126.6	294.1	357.5	754.7
Prior Violent	129.8	411.1	419.7	514.2
Other Felony				
No Prior Violent	155.8	500.5	427.5	721.1
Prior Violent	75.7	311.8	206.3	396.5
Misdemeanor, PINS				
No Prior Violent	441.7	1050.0	532.5	1050.0
Prior Violent	361.3	NA	1046.7	NA
ANOVA: p(F):				
Main Effects				
Group (<i>Schall</i> vs. Control)	.000		.016	
Current Charge	.010		.072	
Prior Violent Charge	.980		.480	
Interactions				
Group by Charge	.569		.956	
Group by Prior Violent	.916		.368	
Charge by Prior Violent	.358		.289	
Covariates				
Total # Prior Incidents	.237		.428	

NA: Empty cells, none rearrested. Means are reported for defendants with at least one rearrest.

with violent crimes was 126 days, but was over one year for rearrests for violent offenses. Failure times were predictably higher for *Schall* defendants charged with non-violent felonies, although quite short (seventy-five days) for those with prior violent charges. Interaction effects for group by current charge and group by prior violence were not significant, indicating that the higher failure times for *Schall* defendants were consistent for all subgroups. There also were no significant effects for the total number of prior arrests, suggesting that overall prior criminal activity also was unrelated to the mean failure time.

Failure times for violent offenses for both *Schall* and control cases were well beyond the ninety day threshold. Since dangerousness is equated with violence in most preventive detention statutes, the results again show that the short-term predictions of subsequent dangerousness during the anticipated pretrial period are inaccurate. While

the court was able to accurately predict a group of offenders likely to commit new violent offenses faster than other defendants, the ability to make short-term predictions remains very limited.

However, analysis of failure times estimates differences in group means for those who exhibit at least one failure event and provides an incomplete picture of the differences between groups. Comparisons of failure times do not examine the temporal pattern of recidivism exhibited by the sample, including those who fail and those who do not (those who "survive" until the end of the follow-up period). Unlike failure time analyses, survival or hazard analyses estimate the probability that an individual will fail during a given time period.¹¹⁴ Accordingly, a proportional hazards model was used to estimate the hazard rates, or probabilities of failure, for the two groups.¹¹⁵ The proportional hazards model is estimated by Cox regression, and the model accounts for both the prevalence and the timing of the rearrest.¹¹⁶

The Cox model maximizes a partial likelihood based only on ranked non-censored cases.¹¹⁷ In the multivariate case of Cox regression, partial likelihood provides the proportional hazards model with unbiased and efficient¹¹⁸ estimates of the relative risk of rearrest associated with changes in key predictor variables.

Cox regression is well suited to censored cases because of non-failure during an interval. For example, in a study of the recidivism of prison releasees, where data are simply (or singly) censored for a two year follow-up period, it is known that only 50% of the cases were rearrested, convicted, or returned to prison. Because of these cases, the actual sample size changes as a function of time, and the exact proportions failing and surviving during each interval cannot be known. As a result, the hazard function cannot be calculated but

¹¹⁴ Christy A. Visher et al., *Predicting the Recidivism of Serious Youthful Offenders Using Survival Models*, 29 CRIMINOLOGY 329 (1991).

¹¹⁵ See PAUL D. ALLISON, *EVENT HISTORY ANALYSIS* (1984); MICHAEL D. MALTZ, *RECIDIVISM* (1984); PETER SCHMIDT & ANN D. WITTE, *PREDICTING RECIDIVISM USING SURVIVAL MODELS* (1988); Paul J. Gruenwald & Barbara R. West, *Survival Models of Recidivism Among Juvenile Delinquents*, 5 J. QUANTITATIVE CRIMINOLOGY 215 (1989).

¹¹⁶ See Visher et al., *supra* note 114; Christy A. Visher & Richard L. Linster, *A Survival Model of Pretrial Failure*, 6 J. QUANTITATIVE CRIMINOLOGY 153 (1990) (basing their study on the pretrial failure of a sample of male arrestees from the District of Columbia). See also MALTZ *supra* note 115; SCHMIDT & WITTE, *supra* note 115; PETER SCHMIDT & ANN D. WITTE, *AN ECONOMETRIC ANALYSIS OF CRIME AND JUSTICE: THEORY, METHODS AND APPLICATIONS* (1984); Chian-Fan Chung et al., *Survival Analysis: A Survey*, 7 J. QUANTITATIVE CRIMINOLOGY 59 (1991).

¹¹⁷ David R. Cox, *Regression Models and Life Tables*, 34 J. ROYAL STAT. SOC'Y 187 (1972).

¹¹⁸ See WILLIAM H. GREENE, *ECONOMETRIC ANALYSIS* (1990); ELISA T. LEE, *STATISTICAL METHODS FOR SURVIVAL DATA ANALYSIS* (1992); Allison, *supra* note 115; Bernard Efron, *The Efficiency of Cox's Likelihood Function for Censored Data*, 72 J. AM. STAT. ASS'N 567 (1977).

must instead be estimated.¹¹⁹ In a more sophisticated model, such as the Weibull, this time function itself may have numerous parameters.¹²⁰

In a multivariate model, the efficacy of judicial predictions of dangerousness are tested by introducing legal and extra-legal predictors first, and then determining whether *Schall* cases differ significantly in the estimation of the hazard function. We compared hazard functions for both ninety and 365 day intervals and for rearrests for any offense or a violent offense. The results are shown in Table 5.

The short-term, ninety day prediction model has direct relevance for assessing the efficacy of preventive decisions that concern the pre-trial period. The model for rearrest for *any* crime is significant

¹¹⁹ This is not the case with transition rate models such as Markov renewal, semi-Markov. See ALLISON, *supra* note 115. Logit or probit models, which are suited uniquely to discrete data, are not very adaptable to progressive censoring. With respect to discrete data, on the other hand, Cox models are not as well suited as transition rate, logit or probit models. In a full parametric model, such as the simple exponential specification, the hazard rate is estimated in terms of a simple parameter, which represents an exponential constant time function with respect to the failure rate.

¹²⁰ See Jordan Leiter, A Comparison of the Specific Deterrent Effects of Official Sanctions Across Drug and Non-Drug Cohorts of Offenders in New York City Between 1983-88 (1994) (unpublished Ph.D. dissertation, Rutgers University School of Criminal Justice). The survival model is represented as

$$S(t) = e^{-t}$$

and the hazard model as

$$h(t) = 1$$

where $h(t)$ is the hazard function, $S(t)$ is the cumulative survival function, t is time, and is a constant to be estimated. In the multivariate case, the model of the hazard function becomes

$$h(t) = 1(t) + B_i X_i$$

where $h(t)$ is the hazard function, $B_i X_i$ is a vector of covariates, and 1 is a constant. In the special case of the proportional hazards model, however, the time function is neither specified nor estimated thanks to the partial likelihood estimation procedure. The model is usually represented as

$$h(\lambda X) = h_0(t) e^{B_i X_i} \text{ SCHMIDT \& WITTE, } \textit{supra} \text{ note 115.}$$

or

$$\log h(t) = a(t) + B_i X_i$$

where $h_0(t)$ or $a(t)$ is a completely arbitrary and unspecified baseline hazard function. The baseline hazard function represents the risk of failure as a function of time when all variables are at their average values. The model assumes that the risks for all cases are simple multiples of the baseline function, and the coefficients thus represent the change in the relative risks of failure (in our case rearrest) associated with a unit change in the independent variable in question. This assumption of relative or proportional risks is the most vulnerable assumption for this type of model, and it must be verified, either through the introduction of time varying covariates, or stratification.

The most distinctive feature of the proportional hazards model is that the B 's are estimated without specifying $h_0(t)$ or $a(t)$, hence the nomenclature are semi-parametric. The partial likelihood test used in Cox regression constructs a likelihood function depending upon the unknown parameters (the B 's) and the observed data, Cox, *supra* note 117, and then finds parameter values that maximize this function based only on those cases that are uncensored, ALLISON, *supra* note 115.

Table 5
 PROPORTIONAL HAZARDS MODEL FOR SHORT AND LONG-TERM
 REARRESTS, *SCHALL* VS. CONTROL CASES (COEFFICIENTS, STANDARD
 ERRORS, AND SIGNIFICANCE OF T-RATIO)^a

	REARRESTED IN 90 DAYS		ANY REARREST	
	Any Offense	Violent Offense	Any Offense	Violent Offense
DEMOGRAPHICS				
Female	-1.11 (1.05)	.29 (1.09)	-.60 (.51)	-.25 (.55)
Asian	-12.25 (418.83)	-10.48 (263.10)	-.53 (.61)	.14 (.61)
Hispanic	-.36 (.41)	-.17 (.56)	-.33 (.25)	-.52 (.28)
White	.58 (.48)	-.78 (1.06)	.11 (.35)	-.78 (.41)
Age at First Contact	-.14* (.07)	-.05 (.11)	-.03 (.04)	-.02 (.05)
Age at Arrest	.10 (.10)	.01 (.12)	.03 (.04)	-.003 (.05)
PRIOR RECORD				
Total Priors	.10 (.07)	.19* (.09)	.10* (.05)	.14 (.06)
Prior Violence	.26 (.41)	-.15 (.60)	-.17 (.27)	-.50 (.30)
CURRENT CHARGES				
Felony Violence	2.33* (1.05)	11.04 (113.20)	1.69*** (.41)	1.76*** (.47)
Other Felony	2.33* (1.03)	10.82 (113.21)	1.36*** (.40)	1.27** (.46)
<i>SCHALL</i> CASE	-.69*** (.20)	-.61* (.28)	-.42*** (.11)	-.45*** (.12)
MODEL STATISTICS:				
-2 Log Likelihood	323.87	155.59	860.35	752.50
Model Chi-square	33.62***	17.26	36.81***	35.09***
Change Chi-square	36.17***	18.07	38.93***	35.88***

^ap(Wald): * p < .05 ** p < .01 *** p < .001

($\chi^2=33.62$, $p<.001$). Significant predictors in the hazard function include age at first juvenile court contact (younger), and a current charge for a violent felony offense. The coefficient for *Schall* cases is also significant, indicating the greater likelihood of rearrest for *Schall* cases during the ninety day period. However, the model for rearrest for a *violent offense* is not significant ($\chi^2=17.26$, $p=.1004$), indicating that the model with predictors does not differ significantly from a model with no predictors. In other words, the prediction of pretrial rearrest for a violent crime using these variables is no better than

Table 6

PROPORTIONAL HAZARDS MODEL FOR SHORT AND LONG-TERM
 REARRESTS, *SCHALL* SAMPLE ONLY (COEFFICIENTS, STANDARD ERRORS,
 AND SIGNIFICANCE OF T-RATIO)^a

	REARRESTED IN 90 DAYS		ANY REARREST	
	Any Offense	Violent Offense	Any Offense	Violent Offense
DEMOGRAPHICS				
White	.69 (.55)	-.57 (1.10)	.40 (.48)	-.79 (.55)
Hispanic	-.37 (.49)	-.21 (.70)	-.66 (.35)	-.11 (.41)
Asian	-12.2 (468.6)	-10.9 (372.1)	.78 (.76)	-.47 (1.04)
Female	-.68 (1.07)	.73 (1.12)	-.74 (.70)	-.82 (.80)
Age at Arrest	-.01 (.34)	.15 (.54)	-.29 (.24)	-.21 (.24)
Age at First Contact	-.001 (.25)	.04 (.38)	.21 (.21)	.04 (.19)
PRIOR RECORD				
Prior Violence	.21 (.47)	-.29 (.72)	.06 (.33)	-.63 (.52)
Total Priors	.12 (.09)	.20 (.12)	.16* (.07)	.12 (.09)
CURRENT CHARGES				
Felony Violence	-1.16* (.53)	-5.78 (68.4)	1.65*** (.50)	2.60* (1.09)
Other Felony	2.09* (1.04)	-11.13 (136.9)	1.47*** (.46)	1.83 (1.03)
MODEL STATISTICS:				
-2 Log Likelihood	207.78	95.98	391.99	323.59
Model Chi-square	14.99	11.71	18.68*	18.66*
Change Chi-square	16.64	11.74	14.87***	9.95**

^a p(Wald): * p < .05 ** p < .01 *** p < .001

chance.

The long-term prediction models also show that *Schall* cases are more likely to be rearrested for either a violent offense or any offense within 365 days of their preventive detention. The model for rearrest for any offense within one year is significant ($\chi^2=36.81$, $p<.001$). Prior record and current charges for either felony violence or another felony are significant predictors. The coefficient for *Schall* cases is significant, again indicating the greater likelihood of their rearrest. The results are the same for rearrest for a violent offense, although prior record is not significant in that model.

To determine whether the elements of danger were themselves predictors of rearrest during the pretrial period, the analyses in Table 5 were repeated only for the *Schall* cases. The models in Table 6 were not significant, for both short and long-term rearrests. In fact, for short-term rearrests for both *any offense* and *violent offenses*, the results run counter to the operational definitions of dangerousness. In the short-term ninety day model, the coefficients for a current violent felony were negative, while the coefficients for prior violence were not significant. Rearrest for *any offense* was predicted better by a current charge for a non-violent felony. None of the predictors were significant for the models of rearrest for a *violent offense*. The long-term prediction models were significant ($\chi^2=18.68$, $p<.05$) for rearrest for any offense and also for rearrest for a violent offense ($\chi^2=18.66$, $p<.01$). In these models, current violent charges were significant but prior violence was not.

The accuracy of prediction of dangerousness during the pretrial period remains questionable. The prediction models are not significant for violent rearrests once we control prior and current dangerousness. While predictions of a broad range of pretrial crimes are efficient, the prediction of dangerousness is unreliable. Presumably, it is the protection from danger that justifies the false prediction and deprivation of liberty in over half of the *Schall* cases. Yet in using the statutory criteria and definitions for determining dangerousness, we are unable to estimate an efficient model for predicting such danger in the short term. The models were constructed so as to permit assessments of judicial predictions after controlling for the degree of risk or dangerousness in the population. The models fail to demonstrate such efficiency. Even the unmeasured factors inherent in the *Schall* prediction, those that would influence the coefficient after controls for legal and extra-legal factors, do not lead to an efficient prediction of pretrial danger. Whatever additional, unmeasured risks influenced the *Schall* prediction, they were not sufficient to yield an efficient prediction model.

IV. CONCLUSIONS

The capacity to select from among a group of accused delinquents those who pose an elevated risk of criminality in the legally critical interval following arrest is clear from the study. These results are all the more impressive given the limited nature of the information available to the judges at the time of the detention decision. Yet the results are ambiguous with respect to the *marginal* gain in predictive efficiency compared to the base rate of offending for this class of

adolescents. The extent of unwarranted detention increases when the statutory basis for preventive detention is narrowed to the dangerousness criteria evident in the Federal Bail Reform Act¹²¹ and in the majority of state preventive detention statutes.¹²² The results do not suggest that the judges were wrong in concluding that the class of *Schall* juveniles posed a "serious risk" that they would commit a crime. Rather, this study simply may help us to quantify that term.

A. ABSOLUTE AND MARGINAL GAINS IN BASE RATE PREDICTIONS

Would an actuarial prediction improve predictive efficiency? When a particular defendant fits the statistical profile for a high base rate group, we could detain that individual based on an actuarial use of prediction with the same predictive validity and efficiency. In this study, that would mean if we detained all of the *Schall* youths without any benefit of a *clinical* assessment of dangerousness, one-out-of-six detainees would have committed a crime if released. The judges in the *Schall* study clearly improved on this actuarial prediction.

However, this improvement actually means that the judges detained 25% more juveniles who would have committed a crime if released than had the judges detained the entire group based on actuarial predictions. In other words, detaining the entire control group would result in the needless detention of five youths to "catch" the sixth who would have recidivated within the pretrial period. Detaining the *Schall* group would result in the needless detention of six-youths-in-ten to "catch" the four who would have recidivated.

These differences are conservative estimates, since the comparisons were based on criteria that were limited to objective factors and did not include the social and behavioral cues that often guide detention decisions: demeanor, victim injury, parental involvement at the detention hearing, and details about current or past crimes. Had more detailed matching criteria been used, we would expect to narrow the gap in rearrest rates between *Schall* and any type of control group.¹²³

¹²¹ 18 U.S.C. § 3142(f) (1988 & Supp. 1993).

¹²² Goldkamp, *supra* note 2, at 71-73 tbl. 8.

¹²³ Differences between *Schall* and control cases in their actual criminality during the pretrial period may be far narrower than is indicated by the rearrest rates. For example, among "high rate" offenders, the annual number of self-reported crimes is nearly seven times higher than the number of crimes for which youths are arrested. See DELBIRT S. ELLIOTT ET AL., MULTIPLE PROBLEM YOUTH (1989); see also Thomas R. Litwack & Louis B. Schlesinger, *Assessing and Predicting Violence: Research, Law and Applications*, in HANDBOOK OF FORENSIC PSYCHOLOGY 205 (Irving B. Weiner & Allen K. Hess eds., 1987).

However, these estimates do not alter the conclusions of this study for two reasons. First, knowledge of offending rates over an interval of one year does not increase the effi-

B. CONSTITUTIONAL CONCERNS

When narrowed to violent crimes,¹²⁴ the decision standard that guides preventive detention statutes in many state predictions are inefficient and the performance is unacceptable. Over 80% of the *Schall* juveniles were not rearrested for a violent offense within the normative pretrial confinement period. Such performance stands at odds with constitutional concerns over false imprisonment and equal protection: "The high rate of false positives demonstrates that the ability to predict future crimes—and especially violent crimes—is so poor that such predictions will be wrong in the vast majority of cases. Therefore, judges should not use [public safety concerns] as an independent justification for major deprivations of liberty such as detention."¹²⁵

Given the adverse consequences for defendants, we should be quite sure that preventive detention will avoid the commission of a very serious crime. Detaining ten arrestees to prevent six from gambling in public, for example, ought clearly to be unacceptable.¹²⁶ Yet, only 36.9% of the *Schall* youths were charged with a violent felony at the time of court appearance. More than six-out-of-ten of the *Schall* youths would have been ineligible for preventive detention under most adult preventive detention statutes. Limiting detention to those accused of violent offenses obviously is fairer to the defendant because this limitation precludes a large class of individuals from eligibility for preventive detention. However, Tables 5 and 6 show that even this limitation on eligibility may be unrelated to the accuracy of the prediction of violence during the pretrial period.

It is difficult to assess this overinclusiveness. The statutes, narrowly interpreted, would suggest that the rate of false positives is unacceptable. It is only when we allow a wide, standardless definition of pretrial danger that the efficacy of the predictions even begins to make sense. In New York, the statute is so vague as to be meaningless

ciency of short-term predictions. Second, extrapolation from prevalence to incidence among sample members does not imply an increase in prevalence within the sample. That is, while the actual offending rate of arrested offenders may be higher than the arrest rate indicates, this does not imply that other members of the sample were actively involved in crimes during the same period. Seeing the tip of an iceberg lends only minimal support to the claim that there are other icebergs in the area, or that they are of the same proportions.

¹²⁴ Assault, robbery, sex-related crimes, kidnapping, homicide, and manslaughter, for which the maximum penalty is imprisonment for greater than one year.

¹²⁵ See Miller & Guggenheim, *supra* note 18, at 386.

¹²⁶ This example is used because in *Schall* one of the juveniles was detained to prevent him from playing three-card monte—a con-artist's gambling game—on the streets. 467 U.S. 253, 295 n.21 (Marshall, J., dissenting) (1984).

with respect to what is being predicted: both petty and minor offenses would comprise the decision standard for dangerousness. This undifferentiated standard runs the risk of predicting everything and nothing at the same time.

It is one thing to disadvantage the accused by detaining him or her to prevent violent felonies. It is quite another to disadvantage a detainee in the outcome of the pending charge. We suggest that this power should be sharply attenuated given the considerable adverse impact detention has on the detainee.¹²⁷ Such detention amounts to unregulated punishment.

Ordinarily, the law will not tolerate deprivations of liberty for punitive purposes without a very high degree of certainty of guilt. The *Schall* cases emphasize the importance of this presumption. Although judges had concluded that the *Schall* juveniles posed a sufficient risk to society in order to require detention upon arrest, more than half were never convicted of the crime for which they were arrested (data not shown). It is impossible to determine what these numbers would have been had the *Schall* group been confined (that is, with no federal court intervention). But it is likely that a considerably higher percentage of juveniles would have been convicted. As studies have consistently shown, when one is detained before trial, the case usually results in conviction.¹²⁸ We know of no study in which the conviction rate of detainees was below 50%. Preventive detention not only results in unnecessary pretrial incarceration of individuals, it also restricts access to a viable defense, and prejudices case outcomes by detention status. These burdens suggest a careful and conservative use of this power.

There are reasonable and constitutional arguments to incapacitate a presumptively innocent individual when we are certain he or she is dangerous. But whenever a significant number of persons are preventively detained, many individuals will be deprived of their liberty even though they would not have endangered the community. In light of the great cost to defendants in terms of case outcomes and sanctions, and the marginal gains to society in crimes averted, preventive detention appears to be unjustified.¹²⁹

¹²⁷ "The power of plea bargaining in the pretrial process where the defendant is detained is extraordinary; only 1% to 10% of all defendants ever make it to the trial stage. A first offender detainee is more likely to be convicted and severely sentenced than a recidivist with more than ten prior arrests who was released before trial." Miller & Guggenheim, *supra* note 18, at 339 n.33 (citing Jeff Thaler, *Punishing the Innocent: the Need for Due Process and the Presumption of Innocence Prior to Trial*, 1978 Wis. L. Rev. 441, 456-57).

¹²⁸ Ares et al., *supra* note 78.

¹²⁹ See Jackson, *supra* note 75, at 332-33.